Info-Hams Digest   Fri, 1 Apr 94   Volume 94 : Issue 360

Today's Topics:
                    BBC   HF Propagation papers ?
                     IGNORE WORLD FTP POSTING
                      New Award Announcement
                      Obscenity on ham bands
                       Plain old repeaters
                      Repeater Voter Questions
                 STOP SENDING HAMS ON USENET CRAP !!!

Date: Thu, 31 Mar 1994 19:15:18 GMT
From: ihnp4.ucsd.edu!library.ucla.edu!csulb.edu!csus.edu!netcom.com!
rbloom@network.ucsd.edu
Subject: BBC   HF Propagation papers ?
To: info-hams@ucsd.edu

  I am looking for some BBC technical reports, in all their
  gory detail on the Fricker FoF2 and mode-find algorithms.
  In the journal articles there are references to BBC
  "pamphlets" which were "readily available" in the mid-'80s.
  Any ideas?

  Ron
  WA6MQC

Date: Thu, 31 Mar 1994 18:55:10 GMT
From: ihnp4.ucsd.edu!library.ucla.edu!csulb.edu!csus.edu!netcom.com!
wy1z@network.ucsd.edu
Subject: IGNORE WORLD FTP POSTING
To: info-hams@ucsd.edu

The periodic reminder posting for World is still floating around, but
shouldn't be.

This is being looked into.

Anyway, please ignore it. The correct location of the files is
oak.oakland.edu:/pub/hamradio

The World posting will hopefully be killed off soon.

Sorry for any inconvenience this may cause.

Scott

--
==
| Scott Ehrlich   Amateur Radio: wy1z   AMPRnet: wy1z@wa1phy.ampr.org |
Internet: wy1z@neu.edu   BITnet: wy1z@NUHUB   AX.25: wy1z@wa1phy.ma.usa.na
Maintainer of the Boston Amateur Radio Club hamradio FTP area on
oak.oakland.edu:/pub/hamradio
==

Date: 31 Mar 1994 19:01:29 GMT
From: ihnp4.ucsd.edu!usc!cs.utexas.edu!howland.reston.ans.net!noc.near.net!
hopscotch.ksr.com!jfw@network.ucsd.edu
Subject: New Award Announcement
To: info-hams@ucsd.edu

ehare@arrl.org (Ed Hare (KA1CV)) writes:
>Rev. Michael P. Deignan (kd1hz@anomaly.sbs.com) wrote:
>: In this age of political correctness, its unfair that we have a "DXCC"
>: award for HF operators, but nothing that a no-code tech can aspire to
>: achieve by yacking on two meters.
>In spite of the uselessness of the rest of the post, this concept has
>some merit. Any ideas for good ways to do this?

Well, there's always RCC. More seriously, there's always grid-chasing and

other similar activities. (Do satellite contacts count for WAS? WAC? I'm
not into paper chasing, so I don't know offhand.)

Having missed the opriginal article, for reasons one might guess, if the
idea is to make it possible to acquire several square meters worth of awards
for sitting in one's chair like the standard DX hound, do we really want to
encourage this? At least grid-square chasing gets one out in the sunlight
now and then ;-).

John, WB7EEL

Date: 31 Mar 1994 18:50:33 GMT
From: ihnp4.ucsd.edu!swrinde!cs.utexas.edu!howland.reston.ans.net!noc.near.net!
hopscotch.ksr.com!jfw@network.ucsd.edu
Subject: Obscenity on ham bands
To: info-hams@ucsd.edu

dhughes@prairienet.org (Dan Hughes) writes:
>I just passed my no-code test last week, and have been listening to some
>ham chatter on my SW receiver. Saturday night on 3910 kHz I heard some
>of the most disgusting language I've encountered anywhere. One guy was
>spouting one obscentity after another, and three other guys were laughing
>at his inept signal and giving it right back to him. All but the
>instigator were regularly giving their calls. Is this pretty much what I
>have to look forward to?

Yes. That's what you get for taking the no-code test.   ;-)

On a slightly more serious note, yeah, there's an abundance of turkeys on
ham radio, just like every other walk of life. Had you tuned to 3913, you
might well have heard people discussing philosophy, or doing disaster-relief
communications. If you ever choose to learn Morse code (which, of course,
you'll need anyway to use 80 meters as anything except an emetic :-), the
CW subbands tend to be somewhat more civilized; your average jerk just
doesn't want to go to that much effort for so little instant gratification
(of course, that means that the above-average jerks show up there from time
to time).

Welcome to reality. And welcome to ham radio, too.   ;-)

John, WB7EEL/1

Date: 31 Mar 1994 17:32:58 GMT
From: ihnp4.ucsd.edu!swrinde!cs.utexas.edu!howland.reston.ans.net!usc!

elroy.jpl.nasa.gov!netline-fddi.jpl.nasa.gov!sec396-news.jpl.nasa.gov!
news@network.ucsd.edu
Subject: Plain old repeaters
To: info-hams@ucsd.edu

In article <223@ted.win.net> mjsilva@ted.win.net (Michael Silva) writes:
>
>In article <2nadq2$hfn@crcnis1.unl.edu>, Gary McDuffie Sr
(mcduffie@unlinfo.unl.edu) writes:
>>bote@access1.digex.net (John Boteler) writes:
>>Okay... I'll bite. Have we quit building full duplex remote bases now?
>>The remote shouldn't care if there is a zero tail or a 20 second tail.
>>What gives?
>>
>
>Our full-duplex radios allow transmitting on one band while receiving
>on the other band. I don't know of any frequency-agile rigs that can
>simultaneously transmit and receive on the same band. That would
>require a repeater-type duplexer that was electronically tunable and
>*tiny*. Remote basing requires simultaneous transmission and reception
>for each direction, so full duplex remote basing would require the rig
>to be transmitting two signals and receiving two signals all at the
>same time. When remoting to a repeater, I have to wait for the repeater
>to stop transmitting so the remote stops transmitting, so it is in a
>position to receive my signal and turn around.

It seems to me that Mike KK6GM is talking about using dual band radio such
as the ones made by Alinco and Icom which can be remotely control. These
radios are not remote bases in the since that most people think of remote
bases. They are nothing more than half-duplex cross band repeaters. It is
interesting to note, that the person who uses such a system loses control
of the repeater until such time as signal on the oter input goes away. A
true remote base would use a pair of frequencies for up link and down link
from the remote system so that the user of the remote base can cause the
remote transceiver to turnaround at any time.

Randy Hammock KC6HUR

Date: 31 Mar 1994 18:25:34 GMT
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!darwin.sura.net!udel!
news.udel.edu!diusys.cms.udel.edu!dave@network.ucsd.edu
Subject: Repeater Voter Questions
To: info-hams@ucsd.edu

Our repeater club is planning to add a couple of remote
receivers and voter to our 2 Meter repeater. The goal

is to fill in dead areas that are well within the
footprint of the machine, but shaded from the main site
by a ridge. We plan to link the remotes to the repeater
site via 440 Mhz.

This will be our first attempt at remote receivers, so
I am looking for advice from people who've been there.

A few questions:

  What voter should we use?
    I've heard good things about Doug Hall products.
    Are there others that should be considered?

  Anyone have suggestions on how to preserve audio
  fidelity over the UHF link?
    One thought I had was to route remote receiver
    detector audio directly to the link xmit modulator.
    This would bypass receiver de-emphasis and link xmit
    pre-emphasis circuitry. Comments?

  What is the best way to match the remote receiver
  audio to the main receiver?
    I assume that audio level and frequency response
    characteristics should be closely matched to make
    the voting process transparent.

I'd also welcome any general advice or experiences folks
have had with remotes that might be of help to us.

Thanks in advance,

    Dave WA3U
    dave@diusys.cms.udel.edu

Date: 31 Mar 1994 13:30:02 -0500
From: ihnp4.ucsd.edu!swrinde!cs.utexas.edu!howland.reston.ans.net!news.ans.net!
hp81.prod.aol.net!search01.news.aol.com!not-for-mail@network.ucsd.edu
Subject: STOP SENDING HAMS ON USENET CRAP !!!
To: info-hams@ucsd.edu

People have such different levels of access to different parts of the internet
that no one method will satisfy all. However, the best solution I can come up
with would be to put the actual postings in one usenet group, and have a short
message in all the others pointing to that usenet area (and an ftp site also)

where they can get the info. Maybe the same should be done for the FAQ
lists... instead of periodic large postings everywhere, one periodic large
posting in one newsgroup, and a short posting everywhere shoing how to get it
from the newsgroup, and how to get it from an ftp site.

btw, where do they get the "hams on usenet" info? does somebody read evey post
and look for a callsign at the bottom?

Jose   KD1SB

Date: 31 Mar 1994 12:56:38 -0500
From: cosmos.nectech.com!cosmos.nectech.com!root@uunet.uu.net
To: info-hams@ucsd.edu

References <bote.764487800@access3>, <VBREAULT.94Mar25134216@rinhp750.gmr.com>,
<Cn8ttu.AHI@news.hawaii.edu>
Subject : Re: Voice mail on a repeater?

In article <Cn8ttu.AHI@news.hawaii.edu>,
Jeffrey Herman <jherman@uhunix3.uhcc.Hawaii.Edu> wrote:
>Are there any repeaters left in this country that just repeat, including
>no musical tones or beeps when you drop your carrier? I miss the old
>days when all one heard was a nice solid kurchunk of the repeater
>receiver's squelch tail quickly followed by a second squelch tail from
>my receiver (the repeater carrier would drop off after 1-2 seconds).
>This seemed to be the way most of the public safety repeaters were
>also set up (particulary the California Division of Forestry
>repeaters back when I was a fireman in the early 70s).
>
>Gary: I'll be disappointed if your repeater beeps.
>
>Jeff NH6IL

 Yes, there is at least ONE left in New England! The 146.745 repeater
located in southern New Hampshire has no beeps, boops, or bells!

It's amazing that some 'new' hams don't seem to know what to do without
a *beep*! Some wait for the tail to drop (it's not nessesary on this
machine), others keep worrying that something is wrong with the repeater
and that it will time out, and others simply don't seem to know how to
communicate without it.

By the way, by 'new' I mean those who weren't around before repeater beeps
were common! It wasn't that long ago!

I usually remind people to just listen to the conversation, not for the beep, and they will know *when* to transmit. I get arguments all the time that a beep is nesesary to know when another person is done transmitting. Some further argue that with a mobile station, the user sometimes drops out of the repeater momentarily, and they think that somehow, the beep will let them know when the person is done transmitting! Even though I try to explain that if a station has dropped out of the repeater's receiver that the beep is going to occur. The repeater has no other way of knowing that a station has stopped transmitting unless it is holding open the COS (or subaudible decoder).

Even with no squealch tail, a person can determine when to speak. If this wasn't possible, then people would have a lot of trouble communicating with the telephone!

 I can see *some* useful ideas for a repeater tail beep, such as indicating special operation of the repeater (such as running on standby power, or that a link is active, etc.). But to get so used to these things that people can't communicate without hearing them is not a good attribute to have IMHO.

 Others have argued that having a 'curtesy beep' allows a pause to let another station 'break' into the conversation. I've found that this doesn't work as people think it should. Most people don't listen to what is going on, and just wait for the beep to transmit. So breaking stations get ignored or tranmitted over. It's really up to the operating habits of the stations involved. A pause can be more effective without the beep!

Another bad trait of the 'beep' is that because people simply don't listen to the conversation, and only listen to the beep the following can happen:

 It was nice talking to you Joe, I'll probably see you tomorrow, ok? *beep*

 AB1CDE .... call please! *beep*

 Wait a minute Bill, there is a breaking station, go ahead AB1CDE! *beep*

 AB1XXX this is AB1CDE, are you there? *beep*
 . . .
 Thanks for the break, AB1CDE clear. *beep*

 Ok, Bill, see you tomorrow at the usual time, bye. *beep*

If AB1CDE had just listened to what was going on, instead of simply 'waiting for the beep', he would have known that the conversation between Joe and Bill was about to end. AB1CDE could've simply made his call without interrupting a conversation in progress.

 Beeps breed bad habits!

Rich, NM1D
--
Rich Bono, Principal Software Engineer, NEC Technologies, Inc.
(508) 635-6300 internet: rbono@nectech.com

Date: Thu, 31 Mar 1994 14:35:25 GMT
From: ihnp4.ucsd.edu!usc!howland.reston.ans.net!cs.utexas.edu!swrinde!sgiblab!
wetware!spunky.RedBrick.COM!psinntp!psinntp!arrl.org!zlau@network.ucsd.edu
To: info-hams@ucsd.edu

References <1994Mar29.160241.20722@ke4zv.atl.ga.us>,
<1994Mar30.150833.7038@arrl.org>, <1994Mar31.004345.251@ke4zv.atl.ga.us>
Subject : Re: RF and AF speech processors. Was: FT-990 vs TS-850

Gary Coffman (gary@ke4zv.atl.ga.us) wrote:
:
: >FWIW, one of the fanatical AM types showed off his phasing
: >receiver at Deerfield NH a few years ago... Guess he didn't
: >notice the distortion Gary is worried about. Come to think
: >of it, I don't recall hearing complaints about the Sony
: >2010's audio quality, which also uses audio phase shift
: >networks. (go through the archives of the shortwave newsgroup?)

: Better still consult the Hi Fi magazines. The Sony 2010, and
: a few other AM receivers, have been *panned* for their poor
: implementation of synchronous detection. Differential phase
: distortion is a hot topic with the high end folks now, probably
: because they've licked almost all the other problems. In
: rec.radio.shortwave the 2010 was panned because it's synchronous
: detector isn't really synchronous. It's actually a form of ISB
: instead of correlating upper and lower sidebands as a true sync
: detector does.

So what?

The point is, does the audio phase shift networks used in the 2010
cause a noticeable degradation in audio quality as perceived by
the users of the radio?   And, since we are primarily talking
about SSB, as opposed to AM, there is *no* benefit to having
a detector that can correlate the upper and lower sidebands--we
only have one sideband to work with on receive.

--
Zack Lau KH6CP/1   2 way QRP WAS
                           8 States on 10 GHz

Internet: zlau@arrl.org   10 grids on 2304 MHz

Date: Thu, 31 Mar 1994 14:05:29 GMT
From: ihnp4.ucsd.edu!swrinde!sgiblab!wetware!spunky.RedBrick.COM!psinntp!psinntp!
arrl.org!zlau@network.ucsd.edu
To: info-hams@ucsd.edu

References <1994Mar29.160241.20722@ke4zv.atl.ga.us>,
<CnG3Jt.Htw@srgenprp.sr.hp.com>, <CnI0t1.DJ@seastar.org>.org
Subject : Re: How phasing SSB Exciters Work (Was: RF and AF speech processors)

John Welch (jjw@seastar.org) wrote:
: As quoted from <CnG3Jt.Htw@srgenprp.sr.hp.com>
by alanb@sr.hp.com (Alan Bloom):

: So, the audio phase shift is the only 'interesting' part...
: How, pray tell, can one having only the usual ham test gear (scope,
: probably, dmm, maybe power supply) make the RF phase shift be 90
: degrees and the same amplitude at, say 12MHz?

First of all, forget the flip flops. A better method is with an LC
or RC phase shifter going into some hard limiting amplifiers, so
amplitude isn't a factor. Actually, with many mixers, a few dB of
amplitude fluctuation isn't a problem. I recently tested a 2.4 GHz
doubly balanced mixer and the output seemed flat with 5 to 7 dBm of
LO drive, dropping by .17 dB with 4 dBm of drive. Its probably flat
with up to 10 dBm of drive.

What you really want to do is tweak up the system, hook up everything
and listen to the sideband you want to reject on a receiver (ideally
with no AGC). You adjust your phase shifter for the best null you
can get.

However, if you get the 19th Eastern VHF/UHF proceedings, Byron
Blanchard advocates another approach. He recommends you use a broadband
quadrature coupler driving limiting amplifiers to give you a fixed
RF phase shift. Instead, you adjust the audio phase shift to eliminate
the unwanted sideband (a circuit is provided).

: My dual-trace scope is not perfectly calibrated, so that's
: out. Generating 48MHz and using flip-flops to get 12MHz in quadrature
: doesn't work well in reality (theory is great, but unless your 48MHz
: signal is *exactly* 50% duty cycle it has a *strong*component at just
: under half of 48MHz, usually near 22MHz. Flip-flops, like all
: non-linear devices, are very good as mixers, and the 22MHz mixes with

```
: the 12MHz to make some *interesting* spurs.  Filtering out these spurs
: usually trashes the 90 degree and equal amplitude you got in the first
: place, leaving you back at square one.)(yes, i do know about this.
: i've tried it.  repeatedly.  i KNOW phasing sounds better, and i
: WANTED it to work *sigh*).  Generate it in quadrature with a dual DDS
: and two DACs?  Then you must filter the DACs outputs through two
: different filters, introducing slightly different phase and amplitude
: errors.
--
Zack Lau  KH6CP/1            2 way QRP WAS
                             8 States on 10 GHz
Internet: zlau@arrl.org   10 grids on 2304 MHz
```

What might be better is a changes file each month with a pointer to the
full file for those who want it.

Failing that, how about posting with the same message IDs every month so all
I have to do is keep the IDs on file to avoid getting the list every time.
Not sure how long sites normally keep message IDs so not sure if it would
work.

Dave
--

```
*****************************************************************************
* G4WRW @ GB7WRW.#41.GBR.EU AX25     *     Start at the beginning. Go on     *
* dave@llondel.demon.co.uk  Internet *      until the end. Then stop.        *
* g4wrw@g4wrw.ampr.org      Amprnet   *      (the king to the white rabbit)  *
*****************************************************************************
```

References <1994Mar23.162557.7558@arrl.org>, <2msav8$8f9@vixen.cso.uiuc.edu>,
<1994Mar25.135851.5580@arrl.org>
Subject : Re: RF and AF speech processors. Was: FT-990 vs TS-850

zlau@arrl.org (Zack Lau (KH6CP)) writes:

>If you clip an ideal DSB waveform (1 kHz modulation), aren't there
>two tones spaced 1 kHz apart that could generate IMD products at
>1.5 kHz and 1.5 kHz (receiver output)? What if you had a significant
>amount of carrier leakthrough that was cleaned up by the crystal
>filter? Couldn't this give you extra tones at 1, 1.5, 2, and 2.5
>kHz (at the receiver)?

Wait... I am completely confused by Zack's arguments.

A DSB signal that has a 1 kc modulation consists of two "carriers"
spaced 2 kc apart, not 1 kc, no? (Imagine AM with 1 kc modulation.
Now take away the carrier.)

Let one of the sidebands be fc+fm and the other be at fc-fm.

If you pass this through horrible non-linearities, you would generate
prediominant spurii at n.fc, n.fc+n.fm, n.fc-n.fm for n = 0,2,3,...
However, these are usually outside the sideband filter's bandwidth if
fc is sufficiently larger than fm (true even for LOWFERS :-).

If the nonlinearity is not too atrocious, the output from the
sideband filter looks pretty clean around where the receiver is tuned
to, it appears to me.

If the nonlinearity is too atrocious, you will start growing n.fm + m.fm
terms for large n and m, and these will eventually appear in your passband
around fc.

IMHO.

73,

Kok Chen, AA6TY   kchen@apple.com
Apple Computer, Inc.

Date: 31 Mar 94 05:23:41 GMT
From: news.bu.edu!olivea!tardis!tymix.Tymnet.COM!niagara!flanagan@purdue.edu
To: info-hams@ucsd.edu

References <tgmCnG945.69o@netcom.com>, <2nai88$3c6@lester.appstate.edu>,
<2nbv3k$p6n@msuinfo.cl.msu.edu>fsd
Subject : Re: HELP! The FCC will not issue me a ham license

We are swamped by so many forms that we often forget to even read them....

FCC Form 610-Instructions
November 1993

INSTRUCTIONS FOR APPLICATION FORM 610 FOR AMATEUR OPERATOR/PRIMARY STATION LICENSE

[...]
If you have not received a response from us within 90 days, write to
Federal Communications Commission, 1270 Fairfield Road, Gettysburg, PA
17325-7245. Include a photocopy of your completed FCC Form 610, or
the following information:

     1. Your name, address, and date of birth;
     2. Your station call sign and operator class;
     3. The date that you filed FCC Form 610;
     4. The purpose of the FCC Form 610 you filed;
     5. The name of the coordinating VEC;
     6. The location of the test site (city and state)
         and the date of the examination.
[...]

--
Dick Flanagan, W6OLD   w6old@n6qmy.#nocal.ca.usa.na
Libelle Productions, Minden, NV, USA   dick@libelle.com
Voice: +1 702 782 0806   GEnie: FLANAGAN

Date: Thu, 31 Mar 1994 18:38:54 GMT
From: ihnp4.ucsd.edu!library.ucla.edu!csulb.edu!csus.edu!netcom.com!
phr@network.ucsd.edu
To: info-hams@ucsd.edu

References <bote.764956814@access1>, <2nadq2$hfn@crcnis1.unl.edu>,
<223@ted.win.net>
Subject : Re: Plain old repeaters

In article <223@ted.win.net>, Michael Silva <mjsilva@ted.win.net> wrote:
>Our full-duplex radios allow transmitting on one band while receiving
>on the other band. I don't know of any frequency-agile rigs that can
>simultaneously transmit and receive on the same band. That would
>require a repeater-type duplexer that was electronically tunable and
>*tiny*. Remote basing requires simultaneous transmission and reception

>for each direction, so full duplex remote basing would require the rig
>to be transmitting two signals and receiving two signals all at the
>same time. When remoting to a repeater, I have to wait for the repeater
>to stop transmitting so the remote stops transmitting, so it is in a
>position to receive my signal and turn around.

Cellular phones do this all the time, including pocket sized ones.
In fact some of them are smaller than any ham HT that I know of.

Date: Thu, 31 Mar 1994 16:19:17 GMT
From: ihnp4.ucsd.edu!swrinde!emory!rsiatl!ke4zv!gary@network.ucsd.edu
To: info-hams@ucsd.edu

References <1994Mar29.160241.20722@ke4zv.atl.ga.us>,
<CnG3Jt.Htw@srgenprp.sr.hp.com>, <CnI0t1.DJ@seastar.org>
Reply-To : gary@ke4zv.UUCP (Gary Coffman)
Subject : Re: How phasing SSB Exciters Work (Was: RF and AF speech processors)

In article <CnI0t1.DJ@seastar.org> jjw@seastar.org (John Welch) writes:
> <much deleted>
>
> So, the audio phase shift is the only 'interesting' part...
>How, pray tell, can one having only the usual ham test gear (scope,
>probably, dmm, maybe power supply) make the RF phase shift be 90
>degrees and the same amplitude at, say 12MHz?

This is the easy part. There are three main ways to do it. The most
straight forward way is a quarterwave transmission line, distributed
or lumped. A second way is to use two loosely coupled LC tanks arranged
so they're in quadrature phase. A third way is to use a RL lag network
in one leg and a RC lead network in the other. Each will give 45 degrees
of phase shift when R=L=C with a net shift between the two of 90 degrees.
Since the RF is a pure tone at one frequency, getting an accurate phase
shift is fairly trivial.

Gary
--
Gary Coffman KE4ZV | You make it, | gatech!wa4mei!ke4zv!gary
Destructive Testing Systems | we break it. | uunet!rsiatl!ke4zv!gary
534 Shannon Way | Guaranteed! | emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244 | |

End of Info-Hams Digest V94 #360
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